WHAT IS CLAIMED IS:

1. A component of a radiation detector comprising:

a substrate;

a photoelectric element arranged on a portion on an upper surface of the substrate and having a first pad on a light receiving surface, the photoelectric element generating an electrical signal based on an intensity of received light;

a pad formation section arranged on a portion on the upper surface of the substrate and different from the portion on which the photoelectric element is arranged; and

a second pad formed on the pad formation section, arranged to form a same plane as a plane of the first pad arranged on the light receiving surface of the photoelectric element, and electrically connected to the first pad.

2. The component according to claim 1, wherein the first pad is electrically connected to the second pad by a bonding wire.

3. The component according to claim 1, further comprising:

a third pad arranged on a rear surface of the substrate; and

a three-dimensional wiring electrically connecting

the second pad to the third pad.

4. The component according to claim 1, wherein the substrate is an MIS substrate; and the three-dimensional wiring is formed by the MID substrate.

5. The component according to claim 1, wherein the three-dimensional wiring includes a through hole formed to penetrate the substrate.

6. The component according to claim 1, wherein the substrate and the pad formation section are formed integrally with each other.

7. A component of a radiation detector comprising:

an MID substrate and a photodiode array provided to contact with the MID substrate;

a pad formation protrusion provided on an upper surface of the MID substrate on a side contacting with a lower surface of the photodiode array, an upper end face of the pad formation protrusion being equal in height to an upper surface of the photodiode array;

first pads provided on upper surfaces of photodiodes of the photodiode array, respectively in a section adjacent

the pad formation protrusion;

second pads provided on the upper end face of the pad formation protrusion in a section adjacent the first pad;

a boding wire provided between one of the first pads and corresponding one of the second pads;

a wiring pattern provided on the upper surface of the MID substrate contacting with the photodiode array;

first terminals as many as the second pads and one second terminal provided on a lower surface of the MID substrate, wherein

the second pads and the first terminals are electrically connected to one another in a one-to-one correspondence; and the wiring pattern is electrically connected to the second terminal.

8. The component according to claim 7, wherein

a positioning groove or a positioning protrusion which positions the photodiode array is provided on the upper surface of the MID substrate.

9. A component of a radiation detector comprising:

an MID substrate and a plurality of photodiodes provided to contact with the MID substrate;

a positioning groove or protrusion which is provided on an upper surface of the MID substrate on a side contacting

with lower surfaces of the photodiodes, and which positions the photodiodes;

a pad formation protrusion provided on the upper surface of the MID substrate, an upper end face of the pad formation protrusion being equal in height to upper surfaces of the photodiodes;

first pads provided on the upper surfaces of the photodiodes, respectively in sections adjacent the pad formation protrusion;

second pads provided on the upper end face of the pad formation protrusion in sections adjacent the first pads, respectively;

a boding wire provided between one of the first pads and corresponding one of the second pads;

a wiring pattern provided on the upper surface of the MID substrate contacting with the photodiodes;

first terminals as many as the second pads and one second terminal provided on a lower surface of the MID substrate, wherein

the second pads and the first terminals are electrically connected to one another in a one-to-one correspondence; and the wiring pattern is electrically connected to the second terminal.

10. The component according to claim 9, wherein

the positioning groove or protrusion is in a form of a bank and functions as a partition between adjacent channels.

11. A component of a radiation detector comprising:

a scintillator array;

a photodiode array arranged on one side surface of the scintillator array in an array aligned direction; and

wirings electrically connected to photodiodes of the photodiode array, respectively, and arranged on a surface of the photodiode array, wherein

a terminal end of each of the wirings is present downstream of a contact section with the scintillator array in a light receiving direction.

12. A component of a radiation detector comprising:

a scintillator array;

a photodiode array arranged on one side surface of the scintillator array in an array aligned direction; and

wirings electrically connected to photodiodes of the photodiode array, respectively, and arranged on a surface of the photodiode array, wherein

each of the wirings extends toward downstream of a contact section with the scintillator array in a light

receiving direction and then extends in the array aligned direction of the scintillator array; and

a terminal end of each of the wirings is present on a lateral position exceeding the contact section with the scintillator array.

13. A component of a radiation detector comprising:

an embedding groove section provided on a part of a substrate;

a photoelectric element array which includes a plurality of photoelectric elements arranged in a one-dimensional array, and which is embedded into the embedding groove section;

a first pad arranged on each of light receiving surfaces of the photoelectric elements; and

a second pad provided on the substrate to correspond to the first pad, and electrically connected to the first pad.

14. The component according to claim 13, further comprising an optical waveguide path upstream of the photoelectric element array in a light receiving direction.

15. The component according to claim 14, wherein

the optical waveguide path guides light incident on a light receiving section provided on an upper surface of the substrate to a light receiving surface of one of the photoelectric elements smaller in light receiving area than the light receiving section.

16. The component according to claim 13, wherein

the second pad is arranged on the upper surface of the substrate; and

the groove section is formed so that the first pad and the second pad form a same plane.

17. The component according to claim 13, wherein

a differential value between a depth of the groove section and a thickness of the photoelectric element array is not more than 1 μm and not less than 100 μm.

18. The component according to claim 13, comprising:

a plurality of the embedding groove sections, wherein

a plurality of the photoelectric element arrays are arranged in a direction at right angle to an array aligned direction of the photoelectric element arrays.

19. The component according to claim 13, further comprising:

a third pad provided on a rear surface of the substrate, wherein

the third pad is electrically connected to the second pad by a through hole formed to penetrate the substrate.

20. A radiation detector comprising a component of a radiation detector including

a substrate;

a photoelectric element arranged on a portion on an upper surface of the substrate and having a first pad on a light receiving surface, the photoelectric element generating an electrical signal based on an intensity of received light;

a pad formation section arranged on a portion on the upper surface of the substrate and different from the portion on which the photoelectric element is arranged; and

a second pad formed on the pad formation section, arranged to form a same plane as a plane of the first pad arranged on the light receiving surface of the photoelectric element, and electrically connected to the first pad; and

a converter arranged on a light receiving surface of the photoelectric element, and converting a received

radiation ray into a light beam in a wavelength band which the photoelectric element can convert into an electrical signal.

21. A radiation detector comprising:

a component of a radiation detector including

an MID substrate and a photodiode array provided to contact with the MID substrate;

a pad formation protrusion provided on an upper surface of the MID substrate on a side contacting with a lower surface of the photodiode array, an upper end face of the pad formation protrusion being equal in height to an upper surface of the photodiode array;

first pads provided on upper surfaces of photodiodes of the photodiode array, respectively in a section adjacent the pad formation protrusion;

second pads provided on the upper end face of the pad formation protrusion in a section adjacent the first pad;

a boding wire provided between one of the first pads and corresponding one of the second pads;

a wiring pattern provided on the upper surface of the MID substrate contacting with the photodiode array;

first terminals as many as the second pads and one second terminal provided on a lower surface of the MID

substrate, wherein

the second pads and the first terminals are electrically connected to one another in a one-to-one correspondence; and

the wiring pattern is electrically connected to the second terminal; and

a scintillator array which is provided on an upper surface of a photodiode array of the component, and which has scintillators provided to correspond to photodiodes of the photodiode array, respectively.

22. A radiation detector comprising:

a component of a radiation detector including

an MID substrate and a plurality of photodiodes provided to contact with the MID substrate;

a positioning groove or protrusion which is provided on an upper surface of the MID substrate on a side contacting with lower surfaces of the photodiodes, and which positions the photodiodes;

a pad formation protrusion provided on the upper surface of the MID substrate, an upper end face of the pad formation protrusion being equal in height to upper surfaces of the photodiodes;

first pads provided on the upper surfaces of the photodiodes, respectively in sections adjacent the pad

formation protrusion;

second pads provided on the upper end face of the pad formation protrusion in sections adjacent the first pads, respectively;

a boding wire provided between one of the first pads and corresponding one of the second pads;

a wiring pattern provided on the upper surface of the MID substrate contacting with the photodiodes;

first terminals as many as the second pads and one second terminal provided on a lower surface of the MID substrate, wherein

the second pads and the first terminals are electrically connected to one another in a one-to-one correspondence; and

the wiring pattern is electrically connected to the second terminal; and

scintillators which are provided on upper surfaces of photodiodes of the component to correspond to the photodiodes, respectively.

23. A radiation detector comprising:

a component of a radiation detector including

a scintillator array;

a photodiode array arranged on one side surface of the scintillator array in an array aligned direction;

and

wirings electrically connected to photodiodes of the photodiode array, respectively, and arranged on a surface of the photodiode array, wherein

a terminal end of each of the wirings is present downstream of a contact section with the scintillator array in a light receiving direction; and

a substrate supporting the component of a radiation detector; and

a wiring provided on the substrate, wherein the wiring on the substrate is electrically connected to a terminal end of each of wirings arranged on a surface of the photodiode array.

24. A radiation detector comprising:

a component of a radiation detector including

a scintillator array;

a photodiode array arranged on one side surface of the scintillator array in an array aligned direction; and

wirings electrically connected to photodiodes of the photodiode array, respectively, and arranged on a surface of the photodiode array, wherein

each of the wirings extends toward downstream of a contact section with the scintillator array in a light

receiving direction and then extends in the array aligned direction of the scintillator array; and

a terminal end of each of the wirings is present on a lateral position exceeding the contact section with the scintillator array; and

a substrate supporting the component.

25. A radiation detection apparatus comprising:

a predetermined number of radiation detectors arranged crosswise, each radiation detector including

a component having

an MID substrate and a photodiode array provided to contact with the MID substrate;

a pad formation protrusion provided on an upper surface of the MID substrate on a side contacting with a lower surface of the photodiode array, an upper end face of the pad formation protrusion being equal in height to an upper surface of the photodiode array;

first pads provided on upper surfaces of photodiodes of the photodiode array, respectively in a section adjacent the pad formation protrusion;

second pads provided on the upper end face of the pad formation protrusion in a section adjacent the first pad;

a boding wire provided between one of the first

pads and corresponding one of the second pads;

a wiring pattern provided on the upper surface of the MID substrate contacting with the photodiode array;

first terminals as many as the second pads and one second terminal provided on a lower surface of the MID substrate, wherein

the second pads and the first terminals are electrically connected to one another in a one-to-one correspondence; and

the wiring pattern is electrically connected to the second terminal; and

a scintillator array which is provided on an upper surface of a photodiode array of the component, and which has scintillators provided to correspond to photodiodes of the photodiode array, respectively.

26. A radiation detection apparatus comprising:

a predetermined number of radiation detectors arranged crosswise, each radiation detector including

a component having

an MID substrate and a plurality of photodiodes provided to contact with the MID substrate;

a positioning groove or protrusion which is provided on an upper surface of the MID substrate on a side contacting with lower surfaces of the photodiodes, and which

positions the photodiodes;

a pad formation protrusion provided on the upper surface of the MID substrate, an upper end face of the pad formation protrusion being equal in height to upper surfaces of the photodiodes;

first pads provided on the upper surfaces of the photodiodes, respectively in sections adjacent the pad formation protrusion;

second pads provided on the upper end face of the pad formation protrusion in sections adjacent the first pads, respectively;

a boding wire provided between one of the first pads and corresponding one of the second pads;

a wiring pattern provided on the upper surface of the MID substrate contacting with the photodiodes;

first terminals as many as the second pads and one second terminal provided on a lower surface of the MID substrate, wherein

the second pads and the first terminals are electrically connected to one another in a one-to-one correspondence; and

the wiring pattern is electrically connected to the second terminal; and

scintillators which are provided on upper surfaces of photodiodes of the component to correspond to the

photodiodes, respectively.

27. A radiation detection apparatus comprising a predetermined number of radiation detectors arranged crosswise, each radiation detector including

a component having

a scintillator array;

a photodiode array arranged on one side surface of the scintillator array in an array aligned direction; and

wirings electrically connected to photodiodes of the photodiode array, respectively, and arranged on a surface of the photodiode array, wherein

a terminal end of each of the wirings is present downstream of a contact section with the scintillator array in a light receiving direction; and

a substrate supporting the component of a radiation detector; and

a wiring provided on the substrate, wherein the wiring on the substrate is electrically connected to a terminal end of each of wirings arranged on a surface of the photodiode array.

28. A radiation detection apparatus comprising a predetermined number of radiation detectors arranged in a direction at right angle to an array aligned direction of a scintillator array, each radiation detector including

a component having

a scintillator array;

a photodiode array arranged on one side surface of the scintillator array in an array aligned direction; and

wirings electrically connected to photodiodes of the photodiode array, respectively, and arranged on a surface of the photodiode array, wherein

each of the wirings extends toward downstream of a contact section with the scintillator array in a light receiving direction and then extends in the array aligned direction of the scintillator array; and

a terminal end of each of the wirings is present on a lateral position exceeding the contact section with the scintillator array; and

a substrate supporting the component

29. A radiation detection apparatus comprising:

a component of a radiation detector including

an embedding groove section provided on a part of a substrate;

a photoelectric element array which includes a plurality of photoelectric elements arranged in a one-dimensional array, and which is embedded into the embedding groove section;

a first pad arranged on each of light receiving surfaces of the photoelectric elements; and

a second pad provided on the substrate to correspond to the first pad, and electrically connected to the first pad; and

a converter arranged on a light receiving surface of each of the photoelectric elements, and converting a received radiation ray into a light beam in a wavelength band which the photoelectric element can convert into an electrical signal.